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METEOROLOGICAL DATA REPORT

NIKE-HYDAC STV-95  
(10 August 1970)

BY

GEORGE M. FUGATE

ATMOSPHERIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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DA Task 1T665702D127-02

ATMOSPHERIC SCIENCES LABORATORY,  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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#### ABSTRACT

Meteorological data gathered for the launching of Nike-Hydac STV-95 are presented for the Space and Missile Systems Organization, AFMDC, Holloman Air Force Base, New Mexico, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.

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## INTRODUCTION

Nike-Hydac STV-95 was launched from the left boom of L-361, White Sands Missile Range (WSMR), New Mexico, at 1119 hours MDT, 10 August 1970.

Meteorological data used in conjunction with theoretical calculations to predict rocket impact were collected by the Meteorological Support Technical Area, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. Ballistics Meteorologists for this firing were George M. Fugate and Gordon L. Dunaway.

## DISCUSSION

Wind data for the first 216 feet above the surface were obtained from a system composed of five Aerovanes mounted on a 200-foot tower and cabled to component wind recorders.

From 216 to 4,000 feet above the surface, wind data were obtained from T-9 Radar tracked balloon ascents.

Temperature, pressure, and humidity data, along with upper wind data from 4,000 to 100,000 feet above the surface, were obtained from standard rawinsonde observations.

Mean wind component values in each ballistic zone were determined from vertical cross sections by the equal-area method.

Theoretical rocket performance values and wind-weighting values as a function of altitude were provided by the Atmospheric Sciences Laboratory and are the basis for the data appearing in Table I.

PAYLOAD		225	Pounds
CORIOLIS DISPLACEMENT	WEST	3.9	Miles
SECOND-STAGE IGNITION	TIME	13.0	Seconds
	ALTITUDE	26,200	Feet MSL
PEAK	TIME	224.7	Seconds
	ALTITUDE	685,000	Feet MSL
UNIT WIND EFFECT	RANGE	2.08	Miles/MPH
	CROSS	2.15	Miles/MPH
			Miles/MPH
TOWER TILT EFFECT		12.15	Miles/Degree

TABLE I. THEORETICAL ROCKET PERFORMANCE VALUES  
NIKE-HYDAC STV-95



LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
9- 68	.162
68- 108	.079
108- 148	.051
148- 184	.048
184- 216	.035
216- 300	.074
300- 400	.055
400- 600	.084
600- 800	.055
800-1000	.040

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
1000- 1400	.060
1400- 2000	.054
2000- 2500	.031
2500- 3000	.015
3000- 3500	.013
3500- 4270	.003
4270- 6000	-.005
6000- 11000	-.013
11000- 16000	-.012
16000- 22200	-.016

LAYERS IN FEET ABOVE GROUND	BALLISTIC FACTORS
22200-24000	.041
24000-26000	.031
26000-31000	.047
31000-36000	.026
36000-41000	.016
41000-46000	.011
46000-53200	.005

TABLE II. BALLISTIC FACTORS  
NIKE-HYDAC STV-95

AERO- VANE NO. *	MEAN WIND COMPONENTS IN MILES PER HOUR									
	1 0900 MDT		2 0930 MDT		3 1000 MDT		4 1010 MDT		5 1020 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	1.0N	3.0W	1.0N	2.0E	2.0S	2.0E	0.0	0.0	0.0	0.0
2	2.0	2.0	2.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2.0	4.0	2.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
4	3.0	5.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
5	4.0	2.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0

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MEAN WIND COMPONENTS IN MILES PER HOUR												
AERO- VANE NO. *	6 1030 MDT		7 1040 MDT		8 1050 MDT		9 1100 MDT		10 1110 MDT		11 1120 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0N	0.0	6.0N	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	6.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	6.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	6.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	6.0	0.0

TABLE III. ANEMOMETER WIND SPEED AND DIRECTION  
NIKE-HYDAC STV-95

\* Heights corresponding to Aerovane Numbers: 1 = 35 Feet 3 = 128 Feet 5 = 200 Feet  
2 = 88 Feet 4 = 168 Feet

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR											
	1		2		3		4		5		6	
	0900 MDT		0930 MDT		1000 MDT		1010 MDT		1020 MDT		1030 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216-- 300	3.5N	4.0W	1.5N	1.0E	0.5S	0.5W	0.5N	0.5W	1.5S	1.5E	2.0S	1.0E
300-- 400	4.5	3.5	2.5	0.5W	0.5	1.0	0.0	1.0	0.0	1.5	0.5N	0.5
400-- 600	2.5	4.5	2.5	2.0	0.0	2.0	0.0	1.0	0.0	1.0	1.0	2.0W
600-- 800	1.5	3.5	1.0	2.5	1.0	2.0	0.5S	1.5	1.0N	2.0	0.5S	1.0
800--1000	1.0S	0.5	2.0	2.5	1.5	1.5	1.5	1.0	1.0S	0.5	0.5N	0.5
1000--1400	4.0	2.0E	0.5S	0.5	2.5	3.0E	3.0	3.0E	1.5	2.0	0.0	1.0E
1400--2000	5.0	5.0	4.5	2.5E	2.5	7.0	1.5	6.5	1.0	4.5	0.5N	4.0
2000--2500	2.5	7.0	5.0	5.0	6.0	9.0	0.5	7.5	0.0	7.0	2.5	6.0
2500--3000	0.0	8.0	4.5	5.5	5.5	9.0	4.5	9.0	3.0S	8.0	1.5S	6.0
3000--3500	1.0N	9.0	1.5	10.0	3.0	9.0	5.0	11.5	6.0	11.0	4.0	8.5
3500--4270	3.0S	7.5	0.0	9.0	1.0	10.5	2.5	10.0	3.5	11.5	6.0	10.5

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA  
NIKE-HYDAC STV-95

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN MILES PER HOUR									
	7		8		9		10		11	
	1040 MDT		1050 MDT		1100 MDT		1110 MDT		1120 MDT	
	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W
216- 300	1.5N	1.0E	0.5N	0.5W	0.5N	1.0W	2.0N	0.0	4.0N	2.0W
300- 400	2.5	2.0	2.0	1.5	0.5E	1.0E	3.5	1.0E	4.0	0.5
400- 600	0.5	2.0	2.0	3.0	3.0N	2.5W	4.5	0.5	5.0	0.5E
600- 800	1.0	2.5W	2.5	2.0	5.0	1.5	5.5	1.0	7.5	1.0
800-1000	3.0	0.5E	3.5	1.0	5.0	1.5	8.5	2.5	8.0	0.5
1000-1400	3.0	3.0	4.5	0.0	6.5	1.0	6.5	2.0	8.5	0.5
1400-2000	2.5	4.0	3.5	2.5E	5.0	3.5E	7.5	1.5	6.5	0.5
2000-2500	3.0E	5.0	3.5	6.5	3.0	7.5	4.0	5.5	4.0	4.0
2500-3000	2.0	6.0	1.0E	7.0	1.5E	6.5	0.5	6.5	1.5E	7.0
3000-3500	4.5	9.0	3.0	9.0	3.5	8.5	4.0E	7.0	5.5	7.5
3500-4270	6.5	12.0	5.0	10.5	4.5	10.5	3.5	9.0	6.0	11.5

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA (CONT)  
NIKE-HYDAC STV-95

LAYERS IN FEET ABOVE GROUND	MEAN WIND COMPONENTS IN KNOTS				
	1 0800 MDT		2 1120 MDT		
	N-S	E-W	N-S	E-W	E-W
4275- 6000	12.08	2.0E	4.58	2.5E	2.5E
6000-11000	7.08	4.0W	4.0	0.0	0.0
11000-16000	4.0N	0.0	4.5	2.5E	2.5E
16000-22200	1.58	5.0E	3.0N	5.0	5.0
22200-24000	1.5	1.5	0.5	2.0	2.0
24000-26000	2.0	2.5	1.5	1.5	1.5
26000-31000	2.5	8.0	3.08	2.5	2.5
31000-36000	0.0	13.0	5.0	8.5	8.5
36000-41000	2.58	7.0	1.0N	6.0	6.0
41000-46000	14.0N	5.0	3.08	16.0	16.0
46000-53200	3.5	20.5	0.0	12.0	12.0

TABLE V. RAWINSONDE-MEASURED WIND DATA  
NIKE-HYDAC STV-99

STATION ALTITUDE 10000.00 FEET MSL  
10 AUG. 70 0800 HRS MDT  
ASCENSION NO. 701

STATION ALTITUDE 10000.00 FEET MSL  
10 AUG. 70 0800 HRS MDT  
TABLE VI

STATION ALTITUDE 10000.00 FEET MSL  
10 AUG. 70 0800 HRS MDT

PRESSURE	TEMPERATURE	REL. HUMID.
ALTITUDE	ATK	PERCENT
MSL FEET	DEGREES CENTIGRADE	(SEE *)
00100	19.0	94.0
07100	20.1	93.0
00100	17.4	89.0
04500	16.8	72.0
50500	-0.4	85.0
47000	-6.9	80.0
43600	-11.3	50.0
40000	-15.6	40.0
37500	-16.3	33.0
35400	-16.9	33.0
33400	-16.3	42.0
33000	-23.7	31.0
32000	-24.4	14.0
27500	-30.4	25.0
27700	-33.6	20.0
18500	-10.3	
18000	-6.4	
15900	-6.0	
12400	-7.2	
11600	-7.9	
10900	-6.9	
10000	-7.0	
10000	-6.4	
9200	-7.2	
8700	-6.3	
8200	-6.1	
8000	-6.3	
7300	-5.1	
7000	-3.7	
6000	-3.3	

\* RELATIVE HUMIDITY DOUBTFUL. RAW INSIDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 3989.00 FEET MSL  
10 AUG. 70 0800 HRS MDT  
ASCENSION NO. 707

SIGNIFICANT LEVEL DATA  
2220020707  
WHITE SANDS  
TABLE VI. (CONT)

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT (SEE *)
5.0	120126.4	-35.2	

\* RELATIVE HUMIDITY UNUSUAL. RAINFALL EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

# UPPER AIR DATA

STATION ALTITUDE 3909.00 FEET MSL  
10 AUG 70 0800 HRS MDT  
ASCENSION IND. 707

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE VII

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNUTS	DIRECTION DEGREES(TN)	SPEED KNUTS	INDEX OF REFRACTION
3909.00	661.0	19.0	94.0	1038.9	669.3	200.0	1.9	1.000326
4000.00	660.7	19.0	93.0	1038.4	669.3	199.5	2.0	1.000326
4500.00	662.3	19.9	81.9	1020.3	669.3	177.6	3.4	1.000311
5000.00	660.1	19.3	78.9	1004.8	668.5	155.7	4.8	1.000302
5500.00	655.2	18.7	75.9	989.6	667.7	133.7	6.3	1.000294
6000.00	620.6	18.1	72.9	974.6	666.9	111.8	7.7	1.000285
6500.00	800.2	17.0	69.9	959.8	666.1	113.2	8.0	1.000277
7000.00	791.0	16.8	69.2	945.6	665.1	120.5	8.1	1.000270
7500.00	777.0	15.9	69.4	931.6	664.0	133.5	9.0	1.000265
8000.00	762.0	15.0	69.7	917.9	662.9	145.5	10.1	1.000259
8500.00	745.5	14.1	69.9	904.3	661.9	155.5	11.4	1.000253
9000.00	730.4	13.3	70.2	891.0	660.8	162.5	12.4	1.000248
9500.00	723.2	12.4	70.4	877.9	659.7	166.4	13.1	1.000243
10000.00	710.2	11.5	70.7	864.9	658.6	170.0	12.8	1.000238
10500.00	697.5	10.6	70.9	852.2	657.5	173.3	11.9	1.000233
11000.00	684.9	9.7	71.2	839.7	656.4	175.0	10.5	1.000228
11500.00	672.0	8.8	71.4	827.3	655.4	176.4	9.0	1.000223
12000.00	660.0	8.0	71.7	815.1	654.3	178.1	6.8	1.000218
12500.00	648.7	7.1	71.9	803.1	653.2	180.9	4.8	1.000214
13000.00	636.6	6.1	73.2	791.2	652.0	185.5	3.2	1.000210
13500.00	625.0	5.1	75.0	779.4	650.8	208.6	2.0	1.000206
14000.00	613.4	4.1	76.8	767.7	649.7	243.8	1.0	1.000202
14500.00	602.0	3.1	78.6	756.3	648.5	330.9	1.0	1.000198
15000.00	590.6	2.2	80.4	745.0	647.3	25.5	1.2	1.000195
15500.00	579.9	1.2	82.2	733.9	646.1	24.1	2.0	1.000191
16000.00	569.1	0.2	84.0	723.0	644.8	25.0	2.7	1.000187
16500.00	558.4	-0.8	84.8	711.9	643.7	28.6	3.3	1.000184
17000.00	547.7	-1.6	84.2	700.7	642.6	23.1	4.1	1.000180
17500.00	537.3	-2.5	83.7	689.6	641.5	5.9	5.2	1.000176
18000.00	527.0	-3.4	83.2	678.7	640.5	2.5	4.8	1.000172

\* RELATIVE HUMIDITY DOUBTFUL. RAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.



STATION ALTITUDE 5969.00 FEET MSL  
10 AUG. 70 0800 HRS MDT  
ASCENSION NO. 701

UPPER AIR DATA  
2220020707  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE VII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT (SEE *)	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNUTS	KNUTS	DIRECTION DEGREES(TN)	SPEED KNUTS	
18500.0	517.0	-4.2	-6.8	82.6	068.0	639.4		11.7	2.8	1.000168
19000.0	507.1	-5.1	-7.7	82.1	057.4	638.3		57.6	2.2	1.000165
19500.0	497.4	-6.0	-8.6	81.6	047.1	637.3		331.2	2.3	1.000161
20000.0	487.9	-6.8	-9.6	81.0	038.8	636.2		264.0	3.1	1.000158
20500.0	478.6	-7.7	-10.5	80.5	028.8	635.1		179.6	4.2	1.000154
21000.0	469.5	-8.5	-11.5	79.3	018.9	634.0		171.5	3.4	1.000151
21500.0	460.3	-9.2	-14.1	67.8	008.6	633.1		202.8	1.6	1.000146
22000.0	451.3	-9.8	-17.0	56.0	596.4	632.3		179.9	0.8	1.000142
22500.0	442.5	-10.5	-20.4	44.3	580.4	631.4		128.3	0.6	1.000137
23000.0	433.9	-11.2	-24.5	32.6	576.6	630.5		45.5	3.6	1.000133
23500.0	425.4	-12.1	-26.6	29.2	567.5	629.5		36.3	6.3	1.000130
24000.0	416.9	-13.2	-27.9	28.2	558.6	627.9		339.8	6.4	1.000128
24500.0	408.7	-14.3	-29.3	27.1	549.9	626.6		340.7	6.1	1.000126
25000.0	400.6	-15.4	-30.6	26.1	541.3	625.5		338.9	5.4	1.000123
25500.0	392.6	-16.3	-30.9	33.2	532.3	624.2		349.7	3.7	1.000122
26000.0	384.7	-17.2	-27.4	41.0	523.5	623.2		6.2	1.5	1.000120
26500.0	377.0	-18.0	-26.5	48.9	514.5	622.1		57.3	1.3	1.000119
27000.0	369.4	-19.3	-26.4	53.8	506.7	620.6		117.4	1.6	1.000117
27500.0	361.9	-20.5	-27.8	52.4	498.8	619.1		125.5	2.1	1.000115
28000.0	354.6	-20.5	-30.0	42.8	488.7	619.1		121.4	2.5	1.000112
28500.0	347.4	-21.7	-32.3	36.0	481.0	617.6		117.0	2.6	1.000110
29000.0	340.5	-22.9	-34.7	33.7	473.8	616.0		112.4	2.6	1.000107
29500.0	333.5	-23.9	-36.4	25.3	465.8	614.8		103.5	3.1	1.000105
30000.0	326.4	-24.7	-44.3	14.5	457.8	613.8		91.9	4.0	1.000103
30500.0	319.6	-25.9	-44.0	16.7	450.2	612.5		97.2	4.8	1.000101
31000.0	312.9	-27.1	-43.9	18.9	442.9	610.9		107.9	5.6	1.000099
31500.0	306.4	-28.3	-43.9	21.1	435.8	609.4		115.6	6.8	1.000098
32000.0	300.0	-29.5	-44.0	23.3	428.8	607.9		122.8	7.8	1.000096
32500.0	293.7	-30.5	-44.5	24.6	421.8	606.4		126.9	7.8	1.000095
33000.0	287.4	-31.7	-45.1	22.9	414.8	605.1		129.2	7.2	1.000093

\* RELATIVE HUMIDITY CLUSTFUL. KAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

UPPER AIR DATA  
2220020707  
WHITE SANDS  
TABLE VII (CONT)

STATION ALTITUDE 3705.00 FEET MSL  
10 AUG. 70 0800 HRS MDT  
ASCENSION NO. 707

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT (SEE #)	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE			KNUTS	KNUTS	DIRECTION DEGREES(TN)	SPEED KNUTS	
33500.0	281.0	-32.0	-47.7	21.2	407.8	603.7	122.5	122.5	6.2	1.000091
34000.0	275.2	-33.9	-49.4	19.7**	400.9	602.2	107.7	107.7	5.7	1.000090
34500.0	269.1	-35.2	-50.9	18.6**	393.9	600.7	91.0	91.0	5.6	1.000088
35000.0	263.0	-36.4	-52.5	17.5**	387.1	599.1	80.0	80.0	6.5	1.000087
35500.0	257.1	-37.7	-54.1	16.4**	380.4	597.5	73.5	73.5	7.8	1.000085
36000.0	251.3	-38.9	-55.7	15.3**	373.6	595.9	82.9	82.9	10.4	1.000083
36500.0	245.7	-40.2	-57.4	14.2**	367.4	594.3	89.9	89.9	12.3	1.000082
37000.0	240.2	-41.4	-59.0	13.1**	361.1	592.8	90.8	90.8	13.0	1.000081
37500.0	234.8	-42.7	-60.6	12.0**	354.9	591.2	92.5	92.5	13.7	1.000079
38000.0	229.5	-43.9	-62.5	10.9**	348.6	589.6	95.0	95.0	14.3	1.000078
38500.0	224.3	-45.1	-64.3	9.8**	342.6	588.0	91.6	91.6	13.5	1.000076
39000.0	219.3	-46.4	-66.2	8.7**	337.0	586.4	84.6	84.6	11.9	1.000075
39500.0	214.4	-47.6	-68.1	7.6**	331.2	584.7	87.3	87.3	11.0	1.000074
40000.0	209.6	-48.9	-70.2	6.5**	325.6	583.1	92.0	92.0	10.3	1.000073
40500.0	204.9	-50.1	-72.4	5.4**	320.0	581.5	95.9	95.9	9.8	1.000071
41000.0	200.3	-51.4	-74.5	4.3**	314.6	579.9	99.6	99.6	9.2	1.000070
41500.0	195.8	-52.6	-77.7	3.3**	309.3	578.3	107.6	107.6	8.7	1.000069
42000.0	191.4	-53.9	-81.1	2.2**	304.0	576.6	116.2	116.2	8.2	1.000068
42500.0	187.1	-55.1	-86.1	1.1**	298.9	575.0	120.0	120.0	6.9	1.000067
43000.0	182.9	-56.3			293.8	573.4	123.2	123.2	5.5	1.000065
43500.0	178.5	-57.2			288.6	572.1	99.3	99.3	3.3	1.000064
44000.0	174.2	-58.2			282.4	570.9	72.5	72.5	1.2	1.000063
44500.0	170.1	-59.1			276.6	569.7	38.9	38.9	4.1	1.000062
45000.0	166.0	-60.0			271.3	568.5	10.0	10.0	6.9	1.000060
45500.0	162.0	-60.9			266.0	567.3	7.6	7.6	9.7	1.000059
46000.0	158.1	-62.0			260.9	565.8	6.8	6.8	12.4	1.000058
46500.0	154.2	-63.4			256.2	563.9	12.2	12.2	14.2	1.000057
47000.0	150.4	-64.7			251.5	562.1	17.3	17.3	15.7	1.000056
47500.0	146.7	-66.1			246.9	560.3	21.3	21.3	15.8	1.000055
48000.0	143.1	-67.4			242.4	558.5	27.0	27.0	16.3	1.000054

\*\* AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

\* RELATIVE HUMIDITY DOUBTFUL. RAWINSONDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

UPPER AIR DATA  
2220020707  
WHITE SANDS  
TABLE VII (CONT)

STATION ALTITUDE 3969.00 FEET MSL  
10 AUG. 70  
ASCENSION NO. 701  
0800. HRS NOT

WSTM SITE COORDINATES  
48850.00 FEET E  
185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNUTS	WIND DATA DIRECTION DEGREES (TN)	WIND DATA SPEED KNUTS	INDEX OF REFRACTION
48500.0	139.6	-68.8		238.0	556.7	38.0	18.1	1.000053
49000.0	138.1	-69.6		233.0	555.5	48.7	19.8	1.000052
49500.0	132.7	-70.4		226.0	554.4	58.9	20.9	1.000051
50000.0	129.3	-71.2		223.1	553.3	67.6	21.9	1.000050
50500.0	126.0	-72.0		218.3	552.2	74.7	22.7	1.000049
51000.0	122.8	-72.7		213.5	551.3	81.2	22.6	1.000048
51500.0	119.7	-73.2		208.6	550.5	87.2	21.6	1.000046
52000.0	116.6	-73.8		203.8	549.8	92.6	20.5	1.000045
52500.0	113.7	-72.6		197.5	551.4	97.2	19.2	1.000044
53000.0	110.8	-70.9		190.9	553.7	101.3	17.8	1.000043
53500.0	108.0	-70.1		185.3	554.8	100.6	16.5	1.000041
54000.0	105.3	-70.5		180.9	554.4	99.9	15.1	1.000040
54500.0	102.6	-69.9		175.9	555.1	94.2	17.5	1.000039
55000.0	100.0	-69.4		171.1	555.8	87.3	20.3	1.000038
55500.0	97.5	-70.3		167.5	554.6	76.7	19.0	1.000037
56000.0	95.1	-71.2		164.0	553.4	68.5	14.1	1.000037
56500.0	92.7	-72.1		160.5	552.2	62.3	10.4	1.000036
57000.0	90.3	-71.7		156.2	552.7	68.1	10.6	1.000035
57500.0	88.1	-70.8		151.7	553.8	74.0	10.8	1.000034
58000.0	85.9	-70.0		147.4	555.0	116.0	6.5	1.000033
58500.0	83.8	-69.1		143.1	556.1	157.9	6.1	1.000032
59000.0	81.7	-68.3		139.0	557.3	144.2	9.5	1.000031
59500.0	79.7	-67.5		135.0	558.5	120.6	13.9	1.000030
60000.0	77.7	-66.8		131.1	559.6	109.6	15.2	1.000029
60500.0	75.8	-66.0		127.3	560.7	103.1	15.6	1.000028
61000.0	73.9	-64.9		123.7	561.9	93.2	16.8	1.000028
61500.0	72.1	-64.1		120.1	563.0	81.5	18.7	1.000027
62000.0	70.3	-63.2		116.7	564.2	75.3	20.7	1.000026
62500.0	68.6	-62.4		113.3	565.3	75.0	22.9	1.000025
63000.0	66.9	-61.6		110.1	566.3	75.2	24.6	1.000025

\* RELATIVE HUMIDITY DOUBTFUL. RAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

UPPER AIR DATA  
220020707  
WHITE SANDS  
TABLE VII (CONT)

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

STATION ALTITUDE 3700.00 FEET MSL  
10 AUG. 70 0800 HRS MDT  
ASCENSION NO. 101

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE MIN	DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
65500.0	65.2	-62.0			107.6	565.8	76.7	24.8	1.000024
64000.0	63.7	-62.3			105.2	565.3	78.3	25.1	1.000023
64500.0	62.1	-62.2			102.6	565.6	80.0	25.3	1.000023
65000.0	60.7	-61.5			99.9	566.4	81.7	25.6	1.000022
65500.0	59.2	-60.9			97.3	567.2	84.2	25.7	1.000022
66000.0	57.8	-60.3			94.7	568.0	86.9	25.8	1.000021
66500.0	56.3	-59.7			92.2	568.8	89.1	25.3	1.000021
67000.0	55.1	-59.1			89.8	569.6	90.0	23.8	1.000020
67500.0	53.8	-58.3			87.4	570.4	91.0	22.3	1.000019
68000.0	52.8	-57.9			85.1	571.2	92.4	23.8	1.000019
68500.0	51.3	-57.3			82.9	572.0	94.0	26.0	1.000018
69000.0	50.1	-56.7			80.7	572.8	95.2	27.6	1.000018
69500.0	48.9	-56.1			78.6	573.6	95.5	27.8	1.000017
70000.0	47.8	-55.5			76.5	574.4	95.7	28.1	1.000017
70500.0	46.7	-54.9			74.5	575.2	94.8	29.3	1.000017
71000.0	45.8	-54.3			72.5	576.0	93.4	30.9	1.000016
71500.0	44.5	-53.7			70.6	576.8	92.2	31.8	1.000016
72000.0	43.4	-53.1			68.8	577.6	92.1	28.7	1.000015
72500.0	42.4	-52.5			67.0	578.4	92.0	25.6	1.000015
73000.0	41.4	-51.9			65.2	579.2	91.0	24.2	1.000015
73500.0	40.4	-51.3			63.5	580.0	89.2	24.1	1.000014
74000.0	39.5	-51.0			61.9	580.4	87.4	24.0	1.000014
74500.0	38.8	-51.0			60.5	580.3	87.8	24.1	1.000013
75000.0	37.7	-51.0			59.1	580.3	88.7	24.3	1.000013
75500.0	36.8	-51.0			57.8	580.3	89.6	24.6	1.000013
76000.0	36.0	-51.0			56.4	580.3	90.9	26.0	1.000013
76500.0	35.2	-51.0			55.1	580.3	92.1	27.5	1.000012
77000.0	34.3	-51.0			53.9	580.3	93.4	28.6	1.000012
77500.0	33.6	-51.0			52.6	580.3	95.2	28.8	1.000012
78000.0	32.8	-51.0			51.4	580.3	97.0	29.0	1.000011

\* RELATIVE HUMIDITY UNUSUAL. RAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 3989.00 FEET MSL  
10 AUG. 70 0800 HRS MDT  
ASCENSION NO. 707

UPPER AIR DATA  
2220020707  
WHITE SANDS

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE VII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
78500.0	32.0	-51.0			50.2	580.3		98.8	29.1	1.000011
79000.0	31.3	-51.0			49.1	580.3		100.6	28.9	1.000011
79500.0	30.6	-51.0			48.0	580.3		102.4	28.7	1.000011
80000.0	29.9	-51.1			46.9	580.3		101.8	27.6	1.000010
80500.0	29.2	-51.1			45.8	580.3		99.5	25.8	1.000010
81000.0	28.5	-51.1			44.7	580.3		97.2	24.1	1.000010
81500.0	27.9	-51.1			43.7	580.3		95.1	24.8	1.000010
82000.0	27.2	-51.1			42.7	580.3		93.1	26.1	1.000010
82500.0	26.6	-51.1			41.7	580.3		91.3	27.1	1.000009
83000.0	26.0	-51.1			40.8	580.3		90.4	27.0	1.000009
83500.0	25.4	-51.1			39.8	580.2		89.4	26.8	1.000009
84000.0	24.8	-51.1			38.9	580.2		89.6	28.5	1.000009
84500.0	24.2	-51.1			38.0	580.2		90.6	31.2	1.000008
85000.0	23.7	-51.1			37.1	580.2		91.5	33.8	1.000008
85500.0	23.1	-51.1			36.3	580.2		90.3	32.0	1.000008
86000.0	22.6	-50.8			35.4	580.6		89.2	30.3	1.000008
86500.0	22.1	-50.5			34.6	581.1		87.6	30.5	1.000003
87000.0	21.6	-50.1			33.8	581.5		85.5	33.2	1.000008
87500.0	21.1	-49.7			33.0	582.0		83.4	35.8	1.000007
88000.0	20.7	-49.4			32.2	582.5		83.7	36.4	1.000007
88500.0	20.2	-49.0			31.4	583.0		84.6	36.5	1.000007
89000.0	19.7	-48.6			30.6	583.4		85.5	36.8	1.000007
89500.0	19.3	-48.3			29.9	583.9		86.4	37.9	1.000007
90000.0	18.9	-47.9			29.2	584.4		87.4	39.1	1.000006
90500.0	18.5	-47.6			28.5	584.8		88.6	39.6	1.000006
91000.0	18.0	-47.2			27.8	585.3		90.1	39.6	1.000006
91500.0	17.6	-46.8			27.2	585.8		91.7	39.5	1.000006
92000.0	17.2	-46.5			26.5	586.2		93.3	41.2	1.000006
92500.0	16.9	-46.1			25.9	586.7		94.9	43.1	1.000006
93000.0	16.5	-45.7			25.3	587.2		96.2	44.9	1.000006

\* RELATIVE HUMIDITY DOUBTFUL. KAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 3509.00 FEET MSL

10 AUG. 70

ASCENSION NO. 101

UPPER AIR DATA

2220020707

WHITE SANDS

WSIM SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

0800 HRS MDT

TABLE VII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC MLITER	SPEED UP		WIND DATA		INDEX OF REFRACTION
		AIR	DEWPOINT			KNUTS	DEGREES	DIRECTION	SPEED	
		DEGREES	CENTIGRADE	(SEE #)		KNUTS		DEGREES(TN)	KNUTS	
93500.0	10.1	-42.4			24.7	587.6		96.6	46.1	1.000005
94000.0	10.6	-42.0			24.1	588.1		96.9	47.3	1.000005
94500.0	10.4	-42.7			23.5	588.6		97.2	48.4	1.000005
95000.0	10.1	-42.3			22.9	589.1		97.1	49.3	1.000005
95500.0	14.7	-43.9			22.4	589.5		96.8	50.1	1.000005
96000.0	14.4	-43.6			21.9	590.0		96.4	50.8	1.000005
96500.0	14.1	-43.2			21.3	590.5		96.1	51.5	1.000005
97000.0	13.8	-42.8			20.8	590.9		95.7	52.3	1.000005
97500.0	13.5	-42.5			20.3	591.4		94.4	51.4	1.000005
98000.0	13.2	-42.1			19.8	591.8		93.1	50.3	1.000004
98500.0	12.9	-41.8			19.4	592.3		91.7	49.2	1.000004
99000.0	12.6	-41.4			18.9	592.8		90.3	48.2	1.000004
99500.0	12.5	-41.0			18.5	593.2		89.0	47.2	1.000004
100000.0	12.0	-40.7			18.0	593.7		87.6	47.2	1.000004
100500.0	11.8	-40.3			17.6	594.2		86.2	47.1	1.000004
101000.0	11.5	-39.9			17.2	594.6		84.9	47.0	1.000004
101500.0	11.2	-39.6			16.8	595.1		83.5	47.0	1.000004
102000.0	11.0	-39.2			16.4	595.6		82.3	46.8	1.000004
102500.0	10.7	-38.9			16.0	596.0		81.5	46.5	1.000004
103000.0	10.5	-38.5			15.6	596.5		80.8	46.1	1.000003
103500.0	10.3	-38.1			15.2	596.9		80.0	45.8	1.000003
104000.0	10.0	-37.8			14.9	597.4		79.2	45.4	1.000003
104500.0	9.8	-37.5			14.5	597.7		78.8	45.5	1.000003
105000.0	9.6	-37.3			14.2	598.0		78.8	46.2	1.000003
105500.0	9.4	-37.0			13.9	598.5		78.9	46.9	1.000003
106000.0	9.2	-36.8			13.6	598.6		78.9	47.6	1.000003
106500.0	9.0	-36.6			13.3	598.9		79.0	48.3	1.000003
107000.0	8.8	-36.3			13.0	599.2		79.7	48.7	1.000003
107500.0	8.6	-36.1			12.7	599.5		81.3	48.5	1.000003
108000.0	8.4	-35.9			12.4	599.8		82.9	48.4	1.000003

# RELATIVE HUMIDITY DOUBTFUL. RAWINSONDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 3989.00 FEET MSL  
10 AUG. 70  
ASCENSION NU. 707

UPPER AIR DATA  
222000Z0707  
WHITE SANDS  
TABLE VII (CONT)

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION
					DIRECTION DEGREES (TN)	SPEED KNOTS	
108500.0	8.3	-35.6		12.1	84.5	48.3	1.0000003
109000.0	8.1	-35.4		11.8	86.1	48.2	1.0000003
109500.0	7.9	-35.1		11.6	87.6	48.0	1.0000003
110000.0	7.7	-34.9		11.3	89.0	47.9	1.0000003
110500.0	7.6	-34.7		11.1	90.4	47.8	1.0000002
111000.0	7.4	-34.4		10.8	91.7	47.6	1.0000002
111500.0	7.3	-34.2		10.6	93.1	47.5	1.0000002
112000.0	7.1	-34.0		10.3	94.4	47.0	1.0000002
112500.0	6.9	-33.7		10.1	95.4	45.9	1.0000002
113000.0	6.8	-33.5		9.9	96.5	44.8	1.0000002
113500.0	6.7	-33.3		9.7	97.6	43.6	1.0000002
114000.0	6.5	-33.0		9.4	98.7	42.5	1.0000002
114500.0	6.4	-33.2		9.2			1.0000002
115000.0	6.2	-33.3		9.1			1.0000002
115500.0	6.1	-33.5		8.9			1.0000002
116000.0	6.0	-33.7		8.7			1.0000002
116500.0	5.8	-33.9		8.5			1.0000002
117000.0	5.7	-34.1		8.3			1.0000002
117500.0	5.6	-34.3		8.2			1.0000002
118000.0	5.5	-34.4		8.0			1.0000002
118500.0	5.4	-34.6		7.8			1.0000002
119000.0	5.2	-34.8		7.7			1.0000002
119500.0	5.1	-35.0		7.5			1.0000002
120000.0	5.0	-35.2		7.4			1.0000002

\* RELATIVE HUMIDITY DUBTFUL. KAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 3000.00 FEET HSE  
 10 AUG. 70 0800 HRS MDT  
 ASCENSION NO. 707

MANUAL OBSERVATIONS

WSTM SITE COORDINATES  
 488500.00 FEET E  
 185045.00 FEET N

TABLE VIII

PRESSURE SUPPLEMENTAL	TEMPERATURE		REL. HUMID.		WIND DATA	
	BAR	DEW POINT	PERCENT	DEGREES (TN)	SPEED	
MILLIBARS	FEET				KNOTS	
650.0	5005.	19.3	79.	122.4	4.9	
600.0	6715.	18.3	69.	110.2	8.0	
550.0	8510.	14.4	70.	124.0	11.4	
700.0	10422.	10.6	71.	172.3	12.0	
650.0	12440.	7.2	72.	180.4	5.0	
600.0	14309.	3.6	79.	344.1	0.9	
550.0	16037.	-1.4	84.	20.5	3.9	
500.0	17303.	-5.7	82.	357.6	2.3	
450.0	22023.	-9.4	84.	172.0	0.8	
400.0	25006.	-13.3	26.	333.8	5.4	
350.0	28270.	-21.2	40.	113.7	2.6	
300.0	31749.	-27.4	23.	122.8	7.8	
250.0	36134.	-39.2	15.4*	80.7	11.3	
200.0	41020.	-51.4	4.4**	100.8	9.1	
175.0	45417.	-56.0		37.4	1.4	
150.0	49740.	-64.9		17.9	15.7	
125.0	50230.	-72.3		70.9	23.0	
100.0	54857.	-69.4		87.3	20.3	
80.0	59200.	-67.6		120.4	12.8	
70.0	61673.	-63.1		75.3	21.0	
60.0	65001.	-61.3		82.5	25.7	
50.0	66734.	-56.6		95.2	27.6	
40.0	73427.	-51.0		80.6	24.0	
30.0	75598.	-51.1		102.2	27.9	
25.0	80409.	-48.9		89.3	27.5	
20.0	86200.	-44.2		84.8	36.5	
15.0	94521.	-44.2		97.2	49.3	
10.0	103570.	-37.7		79.1	45.4	
7.0	11171.	-33.0		95.0	40.3	
5.0	119450.	-35.2				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

\* RELATIVE HUMIDITY DURING. KAWINSOUND EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOUT 40 PERCENT.





UPPER AIR DATA  
 220000Z/00  
 WHITE SANDS  
 TABLE X

STATION ALTITUDE 3989.00 FEET MSL  
 10 AUG. 70 1120 HRS MDT  
 ASCENSION NO. 708

WSTM SITE COORDINATES  
 488880.00 FEET E  
 185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT Celsius	REL. HUM. PERCENT (SEE *)	DENSITY GM/CC METRIC	SPEED OF SOUND KNUTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNUTS	INDEX OF REFRACTION
3989.0	862.6	24.4	66.0	1024.6	674.6	350.0	8.0	1.000319
4000.0	862.5	24.4	66.0	1024.5	674.5	350.4	7.9	1.000319
4500.0	867.0	22.9	63.9	1012.2	672.6	8.0	7.1	1.000303
5000.0	851.9	21.5	61.9	1000.2	670.8	25.6	6.2	1.000292
5500.0	837.2	20.1	59.9	988.3	668.9	43.2	5.4	1.000282
6000.0	822.4	18.0	59.2	975.0	667.5	60.8	4.5	1.000275
6500.0	807.8	16.1	59.6	960.8	666.4	81.3	3.5	1.000269
7000.0	793.4	14.2	60.0	946.7	665.4	102.3	6.7	1.000264
7500.0	779.3	12.3	60.4	932.9	664.3	110.3	7.0	1.000259
8000.0	765.4	10.4	60.8	919.3	663.2	118.4	7.1	1.000253
8500.0	751.8	8.5	61.1	905.9	662.1	126.8	6.3	1.000248
9000.0	738.4	6.6	61.5	892.7	661.0	137.3	5.5	1.000243
9500.0	725.3	4.7	61.9	879.7	659.9	154.1	4.5	1.000238
10000.0	712.4	2.9	62.3	866.9	658.9	169.3	4.1	1.000234
10500.0	699.7	1.0	62.7	854.3	657.8	182.8	4.2	1.000229
11000.0	687.2	0.1	63.2	841.8	656.7	192.3	4.3	1.000224
11500.0	674.6	0.1	64.3	829.3	655.6	199.3	4.4	1.000220
12000.0	662.2	0.1	65.5	817.1	654.5	208.3	3.7	1.000216
12500.0	650.1	0.1	66.6	805.0	653.1	218.4	2.7	1.000212
13000.0	638.1	0.1	67.6	793.1	651.9	192.8	2.7	1.000208
13500.0	626.4	0.1	68.9	781.4	650.8	156.1	3.0	1.000204
14000.0	614.9	0.2	70.1	769.9	649.6	148.7	3.1	1.000200
14500.0	603.6	0.2	71.2	758.3	648.4	144.9	3.2	1.000196
15000.0	592.5	0.2	71.3	747.1	647.2	148.4	4.6	1.000192
15500.0	581.2	0.4	69.2	735.3	646.2	150.9	4.7	1.000187
16000.0	570.2	0.6	67.0	723.6	645.2	146.8	4.6	1.000183
16500.0	559.4	0.2	64.9	712.1	644.2	142.3	4.6	1.000179
17000.0	548.8	0.0	62.7	700.9	643.1	134.7	4.9	1.000174
17500.0	538.4	0.8	60.6	689.7	642.1	129.0	5.1	1.000170
18000.0	528.2	2.6	58.4	678.8	641.1	130.6	4.8	1.000166

\* RELATIVE HUMIDITY, DOWNTOW. KAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 1950.00 FEET MSL  
 10 AUG. 70  
 ASCENSION NUM. 700

UPPER AIR DATA  
 2200Z0700  
 WIND SPEED  
 TABLE X (CONT)

1120 HRS MDT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT (SEL #)	DENSITY UN/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION (T.O.)	WIND SPEED KNOTS	INDEX OF REFRACTION
18500.0	510.2	-3.4	50.3	0.0001	640.1	150.2	4.2	1.000163
19000.0	509.5	-4.2	54.1	0.0001	639.1	147.4	3.3	1.000159
19500.0	498.7	-5.1	52.0	0.0001	638.1	160.3	2.7	1.000156
20000.0	489.3	-5.7	49.6	0.0001	637.1	168.0	2.9	1.000152
20500.0	480.0	-6.7	47.0	0.0001	636.1	143.2	1.9	1.000149
21000.0	470.0	-7.3	45.7	0.0001	635.0	103.5	1.2	1.000146
21500.0	461.0	-8.4	44.6	0.0001	634.0	51.2	1.2	1.000143
22000.0	452.5	-9.2	43.4	0.0001	632.9	11.4	1.3	1.000140
22500.0	443.7	-10.1	42.3	0.0001	631.8	18.9	1.3	1.000137
23000.0	435.0	-11.0	41.1	0.0001	630.6	11.6	1.3	1.000133
23500.0	426.1	-11.8	40.0	0.0001	629.7	11.3	1.1	1.000132
24000.0	416.9	-12.7	38.9	0.0001	628.0	15.5	1.1	1.000129
24500.0	409.7	-13.5	37.7	0.0001	627.3	12.1	1.0	1.000127
25000.0	401.5	-14.3	36.6	0.0001	626.5	19.1	1.0	1.000125
25500.0	393.9	-14.9	35.5	0.0001	625.4	19.4	1.0	1.000122
26000.0	385.5	-15.5	34.3	0.0001	624.2	19.4	1.0	1.000120
26500.0	376.1	-16.2	33.2	0.0001	623.1	19.4	1.0	1.000117
27000.0	366.5	-16.8	32.0	0.0001	621.9	19.4	1.0	1.000115
27500.0	356.0	-17.3	30.8	0.0001	620.6	19.4	1.0	1.000113
28000.0	345.7	-17.8	29.6	0.0001	619.7	19.4	1.0	1.000111
28500.0	335.5	-18.3	28.4	0.0001	618.5	19.4	1.0	1.000109
29000.0	325.4	-18.8	27.2	0.0001	617.4	19.4	1.0	1.000107
29500.0	315.7	-19.3	26.0	0.0001	616.2	19.4	1.0	1.000105
30000.0	306.0	-19.8	24.8	0.0001	615.0	19.4	1.0	1.000103
30500.0	296.6	-20.3	23.6	0.0001	613.9	19.4	1.0	1.000101
31000.0	287.1	-20.8	22.4	0.0001	612.8	19.4	1.0	1.000099
31500.0	277.7	-21.3	21.2	0.0001	611.6	19.4	1.0	1.000098
32000.0	268.0	-21.8	20.0	0.0001	610.5	19.4	1.0	1.000096
32500.0	258.5	-22.3	18.8	0.0001	609.4	19.4	1.0	1.000095
33000.0	249.0	-22.8	17.6	0.0001	608.3	19.4	1.0	1.000093

\* RELATIVE HUMIDITY CALCULATED FROM THE TABLE ABOVE AND PERCENTAGE RELATIVE HUMIDITY ABOVE 40 PERCENT.

UPPER AIR DATA

STATION ALTITUDE 3565.00 FEET MSL  
10 AUG. 70 1120 HRS MDT  
ASCENSION NO. 700

WSIM SITE COORDINATES  
485580.00 FEET E  
185045.00 FEET N

TABLE X (CONT)

GEOMETRIC ALTITUDE	PRESSURE	TEMPERATURE	WIND DIRECTION	WIND SPEED	DENSITY	REL. HUM.	WIND DIRECTION	WIND SPEED	REL. HUM.
MSL FEET	MILLIBARS	DEGREES CELSIUS	DEGREES	KNOTS	GM/CM <sup>3</sup>	PERCENT	DEGREES	KNOTS	PERCENT
33500.0	202.5	-32.2	-49.5	604.1	406.9	10.0	164.5	3.8	1.000092
34000.0	270.2	-33.7	-51.0	602.0	402.2	15.9**	155.3	4.4	1.000090
34500.0	270.5	-34.0	-53.5	601.2	395.4	15.1**	146.5	5.2	1.000088
35000.0	204.7	-35.9	-50.4	599.8	388.6	10.3**	141.7	7.4	1.000087
35500.0	258.9	-37.0	-59.6	598.4	382.0	7.5**	135.5	9.2	1.000085
36000.0	255.2	-38.1	-64.1	597.0	375.2	4.7**	127.2	10.6	1.000084
36500.0	247.0	-39.2	-71.2	595.6	369.1	2.0**	121.9	11.6	1.000082
37000.0	242.4	-40.4		594.1	362.8		118.8	12.3	1.000081
37500.0	236.9	-41.7		592.4	356.6		116.0	12.2	1.000079
38000.0	231.6	-42.9		590.8	350.5		113.2	11.6	1.000078
38500.0	226.4	-44.2		589.2	344.6		111.9	10.8	1.000077
39000.0	221.3	-45.3		587.5	338.7		112.0	9.9	1.000075
39500.0	216.4	-46.6		585.9	333.0		111.9	9.1	1.000074
40000.0	211.5	-48.0		584.2	327.4		111.5	8.3	1.000073
40500.0	206.8	-49.3		582.6	321.8		111.2	7.2	1.000072
41000.0	202.0	-50.3		581.0	316.1		111.0	5.4	1.000070
41500.0	197.3	-51.7		579.5	310.3		109.8	4.1	1.000069
42000.0	192.7	-52.8		578.0	304.7		107.7	3.3	1.000068
42500.0	188.2	-53.9		576.5	299.1		85.2	3.2	1.000067
43000.0	183.8	-55.1		575.0	293.6		48.6	3.6	1.000065
43500.0	179.5	-56.2		573.5	288.3		39.2	4.8	1.000064
44000.0	175.3	-57.4		572.0	283.0		47.6	6.6	1.000063
44500.0	171.2	-58.5		570.5	277.8		53.6	8.5	1.000062
45000.0	167.0	-59.5		569.1	272.3		57.9	10.4	1.000061
45500.0	162.9	-60.6		567.7	267.0		65.1	12.3	1.000059
46000.0	158.9	-61.6		566.4	261.7		76.2	14.3	1.000058
46500.0	155.0	-62.6		565.0	256.6		87.2	16.2	1.000057
47000.0	151.2	-63.6		563.6	251.5		92.4	16.1	1.000056
47500.0	147.6	-64.7		562.2	246.6		97.5	16.0	1.000055
48000.0	144.0	-65.7		560.8	241.8		100.5	15.9	1.000054

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

\* RELATIVE HUMIDITY LUBRIFUL. RAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

UPPER AIR DATA  
2200020703  
WHITE SANDS  
TABLE X (CONT)

WSTM SITE COORDINATES  
48580.00 FEET E  
185045.00 FEET N

STATION ALTITUDE 3939.00 FEET MSL  
10 AUG. 70  
1120 HRS-MDT  
ASCENDING NO. 708

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	REL. HUM. PERCENT (SEE #)	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
48500.0	140.4	-66.7		237.0	559.4	102.1	15.9	1.0000053
49000.0	137.0	-67.8		234.4	558.0	101.2	15.8	1.0000052
49500.0	133.7	-68.9		227.4	556.9	99.9	15.7	1.0000051
50000.0	130.3	-69.5		222.9	555.7	92.7	15.0	1.0000050
50500.0	127.0	-70.1		218.0	554.1	88.6	17.0	1.0000049
51000.0	123.6	-70.7		213.1	553.0	86.3	18.0	1.0000047
51500.0	120.7	-71.4		208.4	551.1	87.7	18.8	1.0000046
52000.0	117.7	-71.8		203.7	549.2	89.6	18.7	1.0000045
52500.0	114.7	-71.7		198.3	547.7	93.1	16.4	1.0000044
53000.0	111.8	-71.5		193.2	546.2	96.0	14.4	1.0000043
53500.0	108.9	-71.4		188.1	544.1	96.3	14.1	1.0000042
54000.0	106.2	-71.2		183.2	542.4	96.5	13.9	1.0000041
54500.0	103.5	-71.0		178.4	540.6	94.5	12.9	1.0000040
55000.0	100.9	-70.8		173.7	538.9	92.5	11.9	1.0000039
55500.0	98.3	-70.6		169.1	537.4	92.9	13.1	1.0000038
56000.0	95.9	-70.4		164.4	535.0	93.7	14.7	1.0000037
56500.0	93.5	-69.9		159.9	532.9	97.0	15.7	1.0000036
57000.0	91.2	-69.0		155.5	530.3	102.4	16.1	1.0000035
57500.0	88.9	-68.3		151.2	527.3	106.8	16.4	1.0000034
58000.0	86.7	-67.8		147.0	525.0	108.7	16.2	1.0000033
58500.0	84.5	-67.2		143.0	522.6	110.5	16.0	1.0000032
59000.0	82.4	-66.3		139.0	520.3	102.7	14.8	1.0000031
59500.0	80.4	-65.1		135.0	519.0	93.8	13.6	1.0000030
60000.0	78.4	-65.0		131.5	517.0	85.3	13.9	1.0000029
60500.0	76.5	-65.2		128.1	515.0	77.4	15.9	1.0000029
61000.0	74.6	-64.7		124.7	512.1	69.7	17.9	1.0000028
61500.0	72.8	-64.5		121.5	509.7	71.8	20.6	1.0000027
62000.0	71.0	-63.9		118.3	506.2	73.8	23.2	1.0000026
62500.0	69.3	-63.5		115.2	503.8	77.4	24.4	1.0000026
63000.0	67.6	-63.1		112.1	501.4	82.1	24.7	1.0000025

\* ALL ALTITUDE NUMERALLY UNCORRECTED. HAWKSONS EQUIPMENT LIMITATIONS. BASE LINE RELATIVE NUMERALLY ABOVE 40 PERCENT.

# UPPER AIR DATA

STATION ALTITUDE 3999.00 FEET MSL  
10 AUG. 70 1120 HRS MDT  
ASCENSION NO. 700

WSTH SITE COORDINATES  
488580.00 FEET E  
185043.00 FEET N

## TABLE X (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT (SEL #)	DENSITY GM/CM <sup>3</sup> METEK	WIND DATA SPEED UP KNUTS DIRECTION DEKLES (TH)	WIND DATA SPEED KNUTS	INDEX OF REFRACTION
63500.0	00.0	-02.7		109.2	86.6	25.0	1.000024
64000.0	04.4	-02.2		106.3	90.3	24.6	1.000024
64500.0	08.8	-01.8		103.6	94.1	24.3	1.000023
65000.0	13.3	-01.4		100.8	95.9	23.7	1.000022
65500.0	17.8	-01.0		98.2	96.9	23.2	1.000022
66000.0	22.3	-00.6		95.6	97.6	22.9	1.000021
66500.0	26.9	-00.2		93.1	98.4	23.3	1.000021
67000.0	31.5	-00.5		90.6	98.9	23.7	1.000020
67500.0	36.2	-00.4		88.0	98.8	23.6	1.000020
68000.0	41.0	-00.2		85.4	98.6	23.5	1.000019
68500.0	45.7	-00.0		83.0	97.5	23.2	1.000018
69000.0	50.3	-00.4		80.6	94.4	23.0	1.000018
69500.0	54.8	-00.3		78.5	91.3	22.7	1.000017
70000.0	59.2	-00.2		76.6	88.1	22.8	1.000017
70500.0	63.0	-00.1		74.8	84.8	22.9	1.000017
71000.0	67.0	-00.0		73.0	82.1	23.2	1.000016
71500.0	71.0	-00.3		71.3	80.9	23.9	1.000016
72000.0	75.0	-00.7		69.6	79.7	24.6	1.000015
72500.0	79.0	-00.6		68.0	79.8	25.3	1.000015
73000.0	83.0	-00.3		66.4	80.4	26.4	1.000015
73500.0	87.0	-00.4		64.8	81.1	27.4	1.000014
74000.0	91.0	-00.3		63.2	83.5	27.9	1.000014
74500.0	95.0	-00.2		61.7	86.0	28.4	1.000014
75000.0	99.0	-00.0		60.3	88.6	29.3	1.000013
75500.0	103.0	-00.0		58.8	91.3	29.6	1.000013
76000.0	107.0	-00.3		57.4	94.4	29.7	1.000013
76500.0	111.0	-00.7		56.1	97.5	29.3	1.000012
77000.0	115.0	-00.8		54.7	101.0	29.5	1.000012
77500.0	119.0	-00.4		53.4	104.5	29.0	1.000012
78000.0	123.0	-00.3		52.2	107.6	28.8	1.000012

\* RELATIVE HUMIDITY CLUSTERS. RAW INSOUND EQUIPMENT LIMITATIONS. BASE LINE. RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 3989.00 FEET MSL  
 10 AUG. 70  
 ASCENSION NO. 100  
 1120 HRS MDT  
 UPPLK AIR DATA  
 2220020708  
 WHITE SANDS  
 TABLE X (CONT.)

WSM SITE COORDINATES  
 488580.00 FEET E  
 165045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT (SEE *)	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
78500.0	32.3	-52.2		50.9	576.6	109.0	29.4	1.000011
79000.0	31.6	-52.1		49.7	576.9	110.4	30.0	1.000011
79500.0	30.6	-51.9		46.5	579.1	111.0	30.2	1.000011
80000.0	30.1	-51.6		47.4	579.5	109.5	29.3	1.000011
80500.0	29.4	-51.3		46.3	579.9	107.9	28.5	1.000010
81000.0	28.6	-51.0		45.1	580.3	106.1	28.0	1.000010
81500.0	28.1	-50.7		44.1	580.7	105.2	28.5	1.000010
82000.0	27.5	-50.4		43.0	581.1	100.4	28.9	1.000010
82500.0	26.9	-50.1		42.0	581.5	97.8	29.4	1.000009
83000.0	26.3	-49.8		41.0	581.9	96.0	30.0	1.000009
83500.0	25.7	-49.5		40.0	582.3	94.1	30.5	1.000009
84000.0	25.1	-49.2		39.0	582.6	92.3	31.2	1.000009
84500.0	24.5	-48.9		38.1	583.0	89.9	32.3	1.000008
85000.0	24.0	-48.7		37.2	583.4	87.6	33.4	1.000008
85500.0	23.4	-48.4		36.3	583.8	85.3	34.5	1.000008
86000.0	22.9	-48.1		35.4	584.2	84.3	35.7	1.000008
86500.0	22.4	-47.8		34.6	584.6	83.4	36.8	1.000008
87000.0	21.9	-47.5		33.8	585.0	82.5	38.0	1.000008
87500.0	21.4	-47.2		32.9	585.3	81.2	38.5	1.000007
88000.0	20.9	-46.9		32.2	585.7	79.5	38.7	1.000007
88500.0	20.4	-46.6		31.4	586.1	77.9	38.9	1.000007
89000.0	20.0	-46.3		30.6	586.5	77.2	39.2	1.000007
89500.0	19.5	-46.0		29.9	586.9	79.0	40.2	1.000007
90000.0	19.1	-45.7		29.2	587.3	80.9	41.2	1.000006
90500.0	18.6	-45.4		28.5	587.7	82.7	42.1	1.000006
91000.0	18.2	-45.1		27.8	588.0	84.7	42.7	1.000006
91500.0	17.8	-44.8		27.1	588.4	86.6	43.3	1.000006
92000.0	17.4	-44.5		26.5	588.8	88.6	43.8	1.000006
92500.0	17.0	-44.2		25.9	589.2	90.8	45.1	1.000006
93000.0	16.6	-43.9		25.2	589.6	93.1	46.8	1.000006

\* RELATIVE HUMIDITY VARIOUS. MAX INSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

STATION ALTITUDE 3709.00 FEET MSL

10 AUG. 70

ASCENSION NO. 700

UPPER AIR DATA

2220020700

WHILE SUND

TABLE X (CONT)

WSTM SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT (SEE *)	DENSITY GM/CUBIC METER	SPEED OF		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	WINDPOINT CENTIGRADE			WIND DIRECTION DEGREES (TN)	SPEED KNOTS			
93500.0	16.2	-43.6			24.6	590.0	85.5	48.4	1.000005	
94000.0	15.9	-43.3			24.1	590.4	97.5	49.3	1.000005	
94500.0	15.5	-42.9			23.5	590.8	100.3	48.5	1.000005	
95000.0	15.2	-42.6			22.9	591.2	102.8	47.7	1.000005	
95500.0	14.8	-42.3			22.4	591.6	105.2	47.0	1.000005	
96000.0	14.5	-41.9			21.9	592.1	106.1	45.1	1.000005	
96500.0	14.2	-41.6			21.4	592.5	106.9	43.2	1.000005	
97000.0	13.9	-41.3			20.9	592.9	107.6	41.3	1.000005	
97500.0	13.6	-41.0			20.4	593.3	107.1	39.0	1.000005	
98000.0	13.3	-40.6			19.9	593.8	105.6	36.3	1.000004	
98500.0	13.0	-40.3			19.4	594.2	104.1	33.7	1.000004	
99000.0	12.7	-40.4			19.0	594.6	102.1	31.4	1.000004	
99500.0	12.4	-40.5			18.6	593.9	97.1	31.6	1.000004	
100000.0	12.2	-40.6			18.2	593.8	92.1	31.7	1.000004	
100500.0	11.9	-40.7			17.8	593.7	87.1	31.9	1.000004	
101000.0	11.6	-40.8			17.4	593.6	84.1	32.7	1.000004	
101500.0	11.4	-40.9			17.1	593.5	81.8	33.8	1.000004	
102000.0	11.1	-41.0			16.7	593.3	79.6	34.9	1.000004	
102500.0	10.9	-41.0			16.3	593.2	78.4	36.2	1.000004	
103000.0	10.6	-41.1			16.0	593.1	79.5	38.0	1.000004	
103500.0	10.4	-41.2			15.6	593.0	80.7	39.8	1.000003	
104000.0	10.2	-41.3			15.3	592.9	81.8	41.7	1.000003	
104500.0	10.0	-41.2			14.9	593.1	82.6	42.9	1.000003	
105000.0	9.7	-40.1			14.6	594.4	83.5	43.9	1.000003	
105500.0	9.5	-39.0			14.2	595.8	84.3	44.9	1.000003	
106000.0	9.3	-38.0			13.8	597.1	85.1	46.0	1.000003	
106500.0	9.1	-36.9			13.4	598.5	87.0	46.4	1.000003	
107000.0	8.9	-36.2			13.1	599.3	88.9	46.8	1.000003	
107500.0	8.7	-35.1			12.8	599.5	90.7	47.2	1.000003	
108000.0	8.5	-35.9			12.5	599.7			1.000003	

\* RELATIVE HUMIDITY DOUBTFUL. RAWINSOUND EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.



STATION ALTITUDE 3989.00 FEET MSL

10 AUG. 70

ASCENSION NO. 700

UPPER AIR DATA

2220020708

WHILE SANDS

TABLE X (CONT)

WSTM SITE COORDINATES

488580.00 FEET E

185045.00 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CC	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNUTS	KNUTS	DIRECTION DEGREES(TN)	SPEED KNUTS	
108500.0	8.4	-35.8			12.3	599.4				1.000003
109000.0	8.2	-35.0			12.0	600.1				1.000003
109500.0	8.0	-35.5			11.7	600.3				1.000003
110000.0	7.8	-35.5			11.5	600.5				1.000003
110500.0	7.7	-35.1			11.2	600.7				1.000002
111000.0	7.5	-35.0			11.0	600.9				1.000002
111500.0	7.3	-34.8			10.7	601.1				1.000002
112000.0	7.2	-34.7			10.5	601.3				1.000002
112500.0	7.0	-34.5			10.3	601.5				1.000002

\* RELATIVE HUMIDITY DOUBTFUL. RAINSONDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

MANDATORY LEVELS

STATION ALTITUDE 5785.00 FEET  
10 AUG 70 1120 HRS MDT  
ASCENSION NO. 100

WSTM SITE COORDINATES  
488580.00 FEET E  
185045.00 FEET N

TABLE X(CONT)

PRESSURE MILLIBARS	POTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		ALT DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5007.	21.3	13.8	62.	28.0	6.1
800.0	6701.	17.6	9.8	60.	93.6	6.2
750.0	8584.	14.4	7.1	61.	126.2	6.2
700.0	10489.	11.0	4.2	63.	182.7	4.2
650.0	12507.	7.1	1.3	67.	218.6	2.7
600.0	14654.	2.9	-1.8	72.	146.0	3.5
550.0	16953.	-0.5	-7.1	63.	155.2	4.9
500.0	19433.	-4.9	-13.3	52.	159.4	2.7
450.0	22130.	-9.5	-19.8	43.	13.6	3.8
400.0	25088.	-14.7	-26.5	36.	60.7	5.7
350.0	28360.	-20.7	-37.0	21.	9.6	4.1
300.0	32050.	-29.0	-47.1	16.	131.7	8.1
250.0	36240.	-38.3	-67.7	3.**	125.1	11.4
200.0	41132.	-51.0			110.9	4.7
175.0	43944.	-57.5			48.3	6.7
150.0	47090.	-64.0			94.4	16.0
125.0	50691.	-70.5			89.9	17.7
100.0	55020.	-70.6			92.3	12.0
80.0	59409.	-66.0			92.4	13.4
70.0	62083.	-63.7			75.2	24.3
60.0	65206.	-61.1			96.7	23.3
50.0	68908.	-54.4			93.2	22.8
40.0	73671.	-53.3			83.2	27.8
30.0	79770.	-51.6			109.2	29.2
25.0	83673.	-49.2			92.2	31.2
20.0	88500.	-46.3			76.7	39.0
15.0	94830.	-42.4			104.1	47.3
10.0	103874.	-41.4			82.5	42.6
7.0	111988.	-34.5				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

\* RELATIVE HUMIDITY DOUBTFUL. RAWINSUNDE EQUIPMENT LIMITATIONS. BASE LINE RELATIVE HUMIDITY ABOVE 40 PERCENT.

RELEASE TIME (MDT)		SECOND-STAGE IMPACT DISPLACEMENT IN MILES DUE TO WIND										AZI- MUTH (DE- GREES)	THEORETICAL IMPACT FROM LAUNCHER (IN MILES)				
		11-216 FT				216-4270 FT				4270-53200 FT						TOTAL	
		N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W	N-S	E-W						
RAWIN- SONDE	PIBAL																
0800	0900	1.5N	2.5W	0.4N	0.5W	0.0	2.7E	1.9N	0.3W	347.7	68.1	66.7N	14.5W				
0800	0930	0.7N	1.8E	0.3N	0.3E	0.0	2.7E	1.0N	4.8E	351.9	66.7	65.8N	9.4W				
0800	1000	0.2S	0.2E	1.7S	1.5E	0.0	2.7E	1.9S	4.4E	351.1	63.7	62.9N	9.8W				
0800	1010	0.0	0.0	1.0S	1.6E	0.0	2.7E	1.0S	4.3E	351.2	64.7	63.8N	9.9W				
0800	1020	0.0	0.0	0.8S	2.8E	0.0	2.7E	0.8S	5.5E	352.4	64.9	64.0N	8.7W				
0800	1030	0.0	0.0	0.1N	1.5E	0.0	2.7E	0.1N	4.2E	351.4	65.4	64.9N	10.0W				
0800	1040	0.0	0.0	1.9N	2.6E	0.0	2.7E	1.9N	5.3E	352.4	67.2	66.7N	8.9W				
0800	1050	0.0	0.0	2.4N	0.1E	0.0	2.7E	2.4N	2.8E	350.4	68.4	67.2N	11.4W				
0800	1100	0.0	0.0	2.8N	0.6E	0.0	2.7E	2.8N	3.3E	350.9	68.9	67.6N	10.9W				
0800	1110	1.8N	0.0	4.8N	1.8E	0.0	2.7E	6.6N	4.5E	352.3	72.4	71.4N	9.7W				
*1120	1120	4.7N	0.0	5.4N	0.8E	0.4S	1.7E	9.7N	2.5E	351.1	75.6	74.5N	11.7W				

TABLE XII. IMPACT PREDICTION DATA  
NIKE-HYDAC STV-95

\* Post shoot data

	AZI- MUTH (DE- GREES)	MILES FROM LAUNCHER		
		RANGE	N-S	E-W
LAUNCHER SETTING (ELEVATION 84.6 DEGREES QE)	351.0	65.6	64.8N	10.3W
NO WIND IMPACT	347.6	66.3	64.8N	14.2W
PREDICTED SECOND STAGE IMPACT	354.0	71.0	70.6N	7.4W
SECOND-STAGE IMPACT, SOTIM TRACK	352.8	75.2	74.6N	9.4W
PREDICTED BOOSTER IMPACT	351.0	1.1	1.1N	0.2W
ACTUAL BOOSTER IMPACT	N/A	N/A	N/A	N/A

TABLE XII. IMPACT PREDICTION DATA (CONT)  
NINE-HYDAC STV-95

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Atmospheric Sciences Laboratory  
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## 13. ABSTRACT

Meteorological data gathered for the launching of Nike-Hydac STV-95 are presented for the Space and Missile Systems Organization, AFMDC, Holloman Air Force Base, New Mexico, and for ballistic studies. The data appear, along with calculated ballistic data, in tabular form.

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KEY WORDS

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LINK B

LINK C

ROLE

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ROLE

WT

ROLE

WT

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2. Meteorology
3. Wind

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